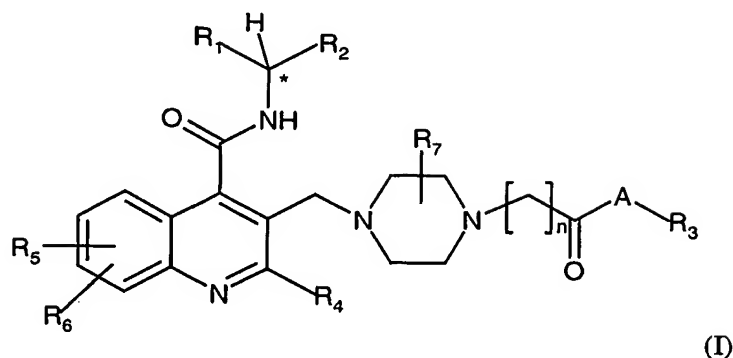


What is claimed is:

1. A compound of formula (I)



wherein:

R<sub>1</sub> is H or substituted or unsubstituted (C<sub>1-6</sub>)alkyl;

R<sub>2</sub> is substituted or unsubstituted aryl, (C<sub>3-7</sub>)cycloalkyl, or heterocycle;

R<sub>3</sub> is H or substituted or unsubstituted (C<sub>1-6</sub>)alkyl, (C<sub>3-7</sub>)cycloalkyl, aryl or heterocycle;

A is NR<sub>8</sub> or O;

R<sub>8</sub> is H or substituted or unsubstituted (C<sub>1-6</sub>)alkyl;

R<sub>4</sub> is substituted or unsubstituted heterocycle;

R<sub>5</sub> is H or up to three substituents independently selected from the list consisting of alkyl, alkenyl, aryl, alkoxy, or a hydroxylated derivative thereof, hydroxy, halogen, nitro, cyano, carboxy, alkylcarboxy, alkylcarboxyalkyl, haloalkyl, amino or mono- or dialkylamino; or R<sub>5</sub> represents a bridging moiety which is arranged to bridge two adjacent ring atoms, wherein the bridging moiety comprises alkyl or dioxyalkylene;

R<sub>6</sub> is H or halo;

R<sub>7</sub> is oxo;

n is 1 to 4; or a pharmaceutically acceptable salt thereof.

5

2. A compound according to claim 1 wherein R<sub>1</sub> is methyl.

3. A compound according to claim 1 wherein R<sub>2</sub> is substituted or unsubstituted phenyl or cyclohexyl.

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4. A compound according to claim 1 wherein R<sub>3</sub> is methyl or substituted or unsubstituted morpholino, piperazine, pyrrole, piperidine, thiophene, imidazole, or pyrazole.

15

5. A compound according to claim 1 wherein R<sub>8</sub> is H or methyl.

6. A compound according to claim 1 wherein R<sub>4</sub> is substituted or unsubstituted 2-thienyl or 3-thienyl.

20

7. A compound according to claim 1 wherein R<sub>5</sub> is H or fluoro.

8. A compound according to claim 1 wherein R<sub>6</sub> is H or fluoro.

9. A compound according to claim 1 which is:

25

3-(4-Dimethylcarbamoylmethyl-3-oxo-piperazin-1-ylmethyl)-2-thiophen-2-yl-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide,

3-[4-(2-Morpholin-4-yl-2-oxo-ethyl)-3-oxo-piperazin-1-ylmethyl)-2-thiophen-2-yl-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide,

30

3-[3-Oxo-4-(2-oxo-2-piperazin-1-yl-ethyl)-piperazin-1-ylmethyl)-2-thiophen-2-yl-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide,

3-(4-Carbamoylmethyl-3-oxo-piperazin-1-ylmethyl)-2-thiophen-2-yl-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide,

- 5 3-{4-[2-(4-Methyl-piperazin-1-yl)-2-oxo-ethyl]-3-oxo-piperazin-1-ylmethyl}-2-thiophen-2-yl-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide,

3-[3-Oxo-4-(2-oxo-piperidin-1-yl-ethyl)-piperazin-1-ylmethyl]-2-thiophen-2-yl-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide,

- 10 3-[3-Oxo-4-(2-oxo-pyrrolidin-1-yl-ethyl)-piperazin-1-ylmethyl]-2-thiophen-2-yl-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide,

- 15 3-[4-(3-Morpholin-4-yl-3-oxo-propyl)-3-oxo-piperazin-1-ylmethyl]-2-thiophen-2-yl-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide,

3-[4-(2-Morpholin-4-yl-2-oxo-ethyl)-2-oxo-piperazin-1-ylmethyl]-2-thiophen-2-yl-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide,

- 20 3-(4-Dimethylcarbamoylmethyl-2-oxo-piperazin-1-ylmethyl)-2-thiophen-2-yl-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide,

6-Fluoro-3-[4-(2-morpholin-4-yl-2-oxo-ethyl)-3-oxo-piperazin-1-ylmethyl]-2-thiophen-2-yl-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide,

- 25 6-Fluoro-3-[3-oxo-4-(2-oxo-2-pyrrolidin-1-yl-ethyl)-piperazin-1-ylmethyl]-2-thiophen-2-yl-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide,

- 30 3-{4-[2-((R)-2-Hydroxymethyl-pyrrolidin-1-yl)-2-oxo-ethyl]-3-oxo-piperazin-1-ylmethyl}-2-thiophen-2-yl-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide,

3-(4-{[(2,5-Dimethyl-2H-pyrazol-3-ylmethyl)-carbamoyl]-methyl}-3-oxo-piperazin-1-ylmethyl)-2-thiophen-2-yl-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide,

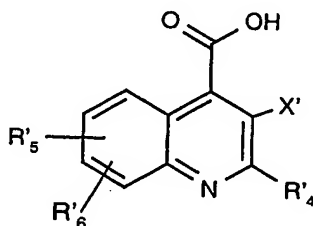
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3-(4-{[(5-Methyl-1H-imidazol-2-ylmethyl)-carbamoyl]-methyl}-3-oxo-piperazin-1-ylmethyl)-2-thiophen-2-yl-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide, and

10 3-{4-[(Methyl-thiophen-2-ylmethyl)-carbamoyl]-methyl}-3-oxo-piperazin-1-ylmethyl)-2-thiophen-2-yl-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide, or a pharmaceutically acceptable salt thereof.

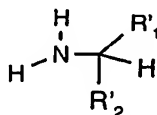
10. A process for the preparation of a compound of formula (I) according to claim 1 or a salt thereof and/or a solvate thereof, which process comprises reacting a

15 compound of formula (II) or an active derivative thereof:



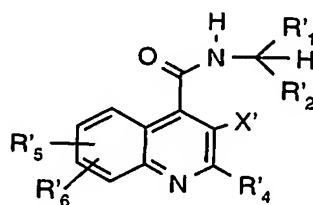
(II)

20 wherein R'4, R'5, R'6 and X' are R4, R5, R6 and X respectively as hereinbefore defined in relation to formula (I) or a group convertible to R4, R5, R6 and X respectively; with a compound of formula (III):



(III)

wherein R'<sub>1</sub> and R'<sub>2</sub>, are R<sub>1</sub> and R<sub>2</sub> as defined for formula (I) or a group or atom convertible to R<sub>1</sub> and R<sub>2</sub> respectively; to form a compound of formula (Ic):



(Ic)

- 5 wherein R'<sub>1</sub>, R'<sub>2</sub>, X', R'<sub>4</sub>, R'<sub>5</sub> and R'<sub>6</sub> are as defined above, and thereafter carrying out one or more of the following optional steps:
- (i) converting any one of R'<sub>1</sub>, R'<sub>2</sub>, X', R'<sub>4</sub>, R'<sub>5</sub> and R'<sub>6</sub> to R<sub>1</sub>, R<sub>2</sub>, X, R<sub>4</sub>, R<sub>5</sub> and R<sub>6</sub> respectively as required, to obtain a compound of formula (I);
  - (ii) converting a compound of formula (I) into another compound of formula (I);
- 10 and
- (iii) preparing a salt of the compound of formula (I) and/or a solvate thereof.
11. A pharmaceutical composition which comprises a compound according to claim 1 and a pharmaceutically acceptable carrier.
- 15 12. A method of treating respiratory diseases in mammals, which comprises administering an effective amount of a compound according to claim 1.